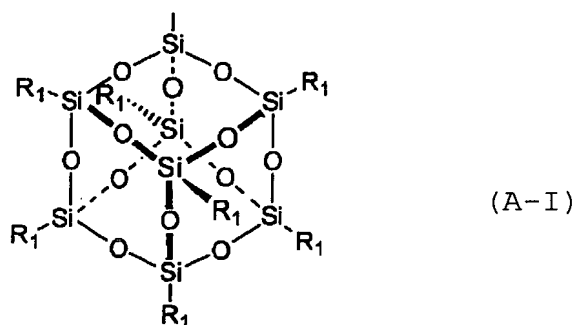


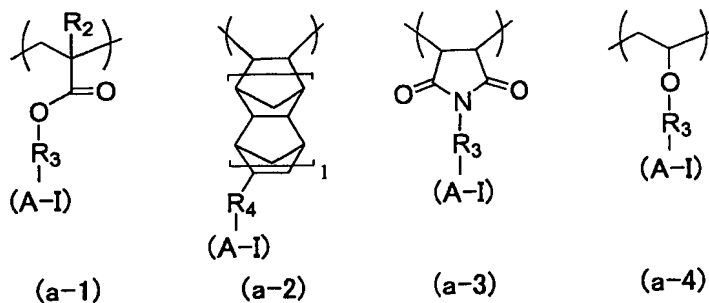
WHAT IS CLAIMED IS:

1. An intermediate layer material composition for a multilayer resist process, comprising (A) a polymer containing a repeating unit having on a side chain thereof a group represented by the following general formula (A-I):



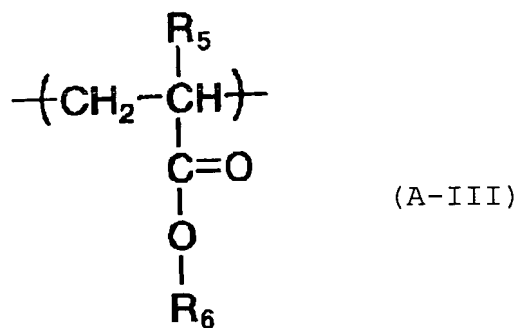
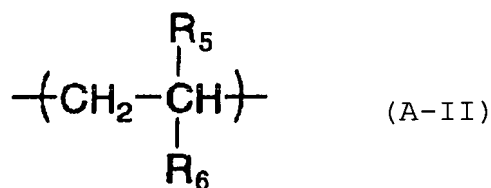
wherein R_1 represents an alkyl group, an alkoxyl group, an aryl group, an aralkyl group, a cyclopentyl group or a cyclohexyl group; a plurality of R_1 's each may be the same or different.

2. The intermediate layer material composition described in claim 1, wherein the polymer is a polymer having at least one of repeating units represented by the following general formulas (a-1) to (a-4):



wherein (A-I) represents the group represented by the general formula (A-I) described in claim 1; R₂ represents a hydrogen atom or a methyl group; R₃ represents an alkylene group or a phenylene group; R₄ represents an alkylene group, a phenylene group or -C(=O)-O-R'-; R' represents an alkylene group.

3. The intermediate layer material composition described in claim 1, wherein the polymer further contains at least one of a repeating unit represented by the following general formula (A-II) and a repeating unit represented by the following general formula (A-III):



wherein R₅ represents a hydrogen atom or a methyl group; R₆ represents an aryl group or an aralkyl group.

4. The intermediate layer material composition

described in claim 1, wherein the polymer contains the repeating unit having on a side chain thereof the group represented by the following general formula (A-I) in an amount of 3 to 90 mol%.

5. The intermediate layer material composition described in claim 1, which further comprises (B) a crosslinking agent.

6. The intermediate layer material composition described in claim 5, wherein the crosslinking agent (B) is a phenol derivative having a molecular weight of 1,200 or less, containing 3 to 5 benzene rings in its molecule, and having 2 or more hydroxymethyl groups or alkoxymethyl groups in total, wherein the hydroxymethyl groups or alkoxymethyl groups bind to the benzene rings.

7. The intermediate layer material composition described in claim 1, which further comprises (C) a compound capable of generating an acid by heat.

8. The intermediate layer material composition described in claim 1, which further comprises (D) a solvent.

9. The intermediate layer material composition

described in claim 1, which further comprises (E) a surfactant.

10. A process for forming a resist pattern, which comprises:

forming on a substrate a lower resist layer comprising an organic material;

forming on the lower resist layer an intermediate layer using the intermediate layer material composition described in claim 1;


forming on the intermediate layer an upper resist layer comprising an organic material crosslinkable or decomposable by a radiation exposure;

forming a predetermined pattern on the upper resist layer; and

etching the intermediate layer, the lower resist layer and the substrate, sequentially.

11. The process described in claim 10, wherein the intermediate layer is formed by coating the intermediate layer material composition described in claim 1 on the lower resist layer, and then baking the coating to be insolubilized in an organic solvent.

12. The process described in claim 11, wherein the coating is baked at a temperature of 150 to 250°C.



13. The process described in claim 10, wherein the lower resist layer has a thickness of 0.1 to 4.0 μm .

14. The process described in claim 10, wherein the intermediate layer has a thickness of 0.02 to 0.6 μm .

15. The process described in claim 10, wherein the upper layer has a thickness of 0.03 to 0.6 μm .